2019 Iowa Oral Health Survey Report - WIC

Bureau of Oral and Health Delivery Systems
December 2019

Iowa Department of Public Health
Protecting and Improving the Health of Iowans

Acknowledgements

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Glossary

Decay: Readily observable breakdown of the enamel surface (cavitated lesions) or staining in pits or fissures of primary (baby) molars.

Demineralization: Tooth enamel, adjacent or close to the soft tissue margin, appearing chalky and white. No clinically visible or irreversible loss of enamel or break in enamel surface is present.

Filled Teeth: The presence of any type of restoration, including a temporary filling or a tooth that is missing because of extraction as the result of tooth decay.

History of Decay: The presence of decayed and/or filled teeth.

Metropolitan: (1) Having at least one urbanized area of 50,000 population or more and (2) may include adjacent counties with a minimum of 25% of workers commuting to the central counties of the metropolitan statistical area. As of 2019 in Iowa, these counties are: Benton, Black Hawk, Boone, Bremer, Dallas, Dubuque, Grundy, Guthrie, Harrison, Jasper, Johnson, Jones, Linn, Madison, Mills, Polk, Pottawattamie, Scott, Story, Warren, Washington and Woodbury.

Micropolitan: (1) Having at least one urban cluster of 10,000 or more but less than 50,000 population and (2) may include adjacent counties with a minimum of 25% of workers commuting to the central counties of micropolitan statistical area. As of 2019 in Iowa, these counties are: Buena Vista, Carroll, Cerro Gordo, Clay, Clinton, Davis, Des Moines, Dickinson, Jefferson, Lee, Mahaska, Marion, Marshall, Muscatine, Wapello, Webster and Worth.

Rural: (1) Not having an urban cluster of 10,000 population or more and (2) having less than 25% of workers commuting to central counties of micropolitan or metropolitan areas. As of 2019 in Iowa, these are the remaining 61 counties not listed in the metropolitan or micropolitan descriptions.

WIC Participation: Active WIC participants who have been issued benefits.

List of Acronyms

HISP.....Hispanic

IDPH..... Iowa Department of Public Health

MCH.....Maternal and Child Health

NHB..... Non-Hispanic Black

NHO..... Non-Hispanic Other

NHW.....Non-Hispanic White

WIC……Special Supplemental Nutrition Program for Women, Infants and Children

Report

Introduction

The Iowa Department of Public Health (IDPH) coordinated an oral health survey of children 4 years of age and younger enrolled in Iowa's Special Supplemental Nutrition Program for Women, Infants and Children (WIC) from June 1 through August 31, 2019. Dental screenings are routinely provided at WIC clinics through I-Smile™, the oral health component of Iowa's Title V Maternal and Child Health (MCH) program. This report describes the importance, survey methods and results of this oral health survey, in addition to the impact of I-Smile™ on children's oral health in Iowa.

Background

I-Smile™ is a statewide program connecting children and families with dental, medical and community resources to ensure a lifetime of health and wellness. Each of Iowa's 23 local Title V MCH contractors has a dental hygienist who serves as the I-Smile™ coordinator for designated service areas. The coordinators carry out I-Smile™ strategies, focusing on preventing dental disease, identifying ways to help families receive care from dentists, and promoting the importance of oral health within the communities they serve.

I- Smile™ prioritizes serving children with Medicaid health and dental coverage, those uninsured, or those that are underinsured. Providing preventive dental services at WIC clinics across Iowa is a requirement for the I-Smile™ program, due to data that shows a limited number of very young children seeing a dentist.[1] The average monthly WIC participation for children ages 1-5 in Iowa was 31,828 from October 2017 through September 2018.[2]

Oral health surveys provide an understanding about oral health status and dental disease prevalence among a selected population. The last WIC oral health survey in Iowa was completed in 2010, five years after initial implementation of the I-Smile™ program. The results from the 2019 WIC oral health survey allow for comparison across 10 years and among demographic populations, as well as the ability to consider impact of I-Smile ™. Available resources, such as the I-Smile™ infrastructure and requirements, partnerships, and consistent and meaningful data collection, resulted in minimal additional staff time or funding needed to complete this survey.

Understanding the prevalence of dental decay is crucial, as it is the most common chronic illness among children and leads to problems eating, speaking and learning when left untreated.[3] Dental decay can be painful and is irreversible. Unless properly treated, decay leads to infection of the teeth and gums, ultimately leading to tooth loss or infections in other areas of a child's body. Dental decay affects a child's ability to eat, sleep, and function at their full potential at home and school. Additionally, the aesthetics of dental decay can negatively affect a child's social development and self-esteem.[4] Furthermore, dental decay can influence a child's school attendance and performance.[5]

Objectives

This oral health survey fulfilled two important goals:

1. To acquire an understanding of dental disease prevalence among children age 4 and younger enrolled in the Iowa WIC program; and

2. To evaluate dental disease prevalence among WIC-enrolled children in comparison with the 2010 WIC Oral Health Survey and the potential impact of I-Smile™.

Methods

Data Collection

IDPH contracts with 23 public and/or private non-profit organizations serving all 99 Iowa counties for the Title V MCH program. I-Smile™ is the oral health component of the Title V MCH program. Contractors are required to collaborate with their local WIC programs to provide preventive dental services for children age 4 and younger, to reduce the potential for invasive dental procedures due to dental disease. IDPH used the data system in place for Title V MCH and I-Smile™ (**signify**community), accessing regularly collected data to achieve the survey objectives, thus reducing overall costs for the survey.

To assure consistency among the dental hygienists and registered nurses who provide dental screenings at WIC clinics, a calibration webinar training was held in May 2019. Any registered nurse or dental hygienist who would be providing dental screenings at WIC was required to participate; participation was confirmed through completion of an online calibration quiz. The quiz also helped to recognize inconsistencies across screeners as explained by the required webinar training.

Dental hygienists and registered nurses provided dental screenings for children enrolled in WIC, following regular program protocols. They screened 6,070 children 5 and younger, 4,063 that were between 1 and 4 years of age, and 5,143 between 6 months and 4 years of age.

Three screening indicators (decay, history of decay and demineralization) and three consent form indicators (usual source of dental care, payment source for child's dental care and child's last dental visit) were the focus for this survey, along with demographic information (race, ethnicity, age, gender and county of service). These indicators were addressed in the webinar training and required to be collected for every child screened.

Finally, a newly created data entry dashboard in Iowa's Title V MCH data system, **signify**community, allowed contractors to make necessary and timely data entry corrections. This facilitated error correction for both the contractors and IDPH.

Statistical Analyses

Though children age 4 and younger enrolled in WIC were screened for this oral health survey, those under age 1 were excluded from analyses, as it is less likely they have had erupted teeth for a long enough duration that decay could be present. However, data comparisons to the 2010 WIC oral health survey include ages 6 months and older, since they were not excluded from 2010 analyses. Missing responses to pertinent variables were excluded from analyses.

Consent/Demographics

Consent form indicators and demographic information used a multiple-choice format for data collection. Additionally, the consent form indicator "child's last dental visit" was asked as a multiple-choice question with the answer options: within the past 6 months/1 year/3 years/5 years/Never. Since the answer options are heavily based on the age of the child, for data reporting this was modified to be

"yes" and "no," with "no" indicating the parent or guardian responded "Never" and "yes" indicating a response of within "6 months," '1 year," "3 years" or "5 years."

The race and ethnicity question was combined on the paper consent form, and entered as separate responses in **signify**community based on set guidelines. If the ethnicity field on the consent contained "Hispanic/Latino," the child was reported as "Hispanic." If the ethnicity field indicated they were "Not Hispanic/Latino," the child was reported within one of the "non-Hispanic" race categories. "Non-Hispanic White" was reported if the only race selected was "White." "Non-Hispanic Black" was reported if the only race selected was "Black or African American." Finally, "Non-Hispanic Other" was reported if "White" or "Black" races and Hispanic ethnicity was not selected on the consent.

Urban/rural classification is determined based on county (location) of service. Iowa counties considered "metropolitan" by the U.S. Office of Management and Budget are: Benton, Black Hawk, Boone, Bremer, Dallas, Dubuque, Grundy, Guthrie, Harrison, Jasper, Johnson, Jones, Linn, Madison, Mills, Polk, Pottawattamie, Scott, Story, Warren, Washington and Woodbury. Counties determined "micropolitan" are: Buena Vista, Carroll, Cerro Gordo, Clay, Clinton, Davis, Des Moines, Dickinson, Jefferson, Lee, Mahaska, Marion, Marshall, Muscatine, Wapello, Webster and Worth. The remaining 61 counties are considered "rural" (refer to Appendix C).[6]

Screening

All primary screening indicators are yes or no questions, "yes" indicating the indicator is present, and "no" that it is not present. In addition to the three required screening indicators, history of decay was calculated by "yes" representing either a filled tooth and/or untreated decay was present, and "no" demonstrating neither a filled tooth nor untreated decay was present in the child's mouth. Demineralization and referral need were eliminated from the report due to unreliability as determined by inconsistency across contractors.

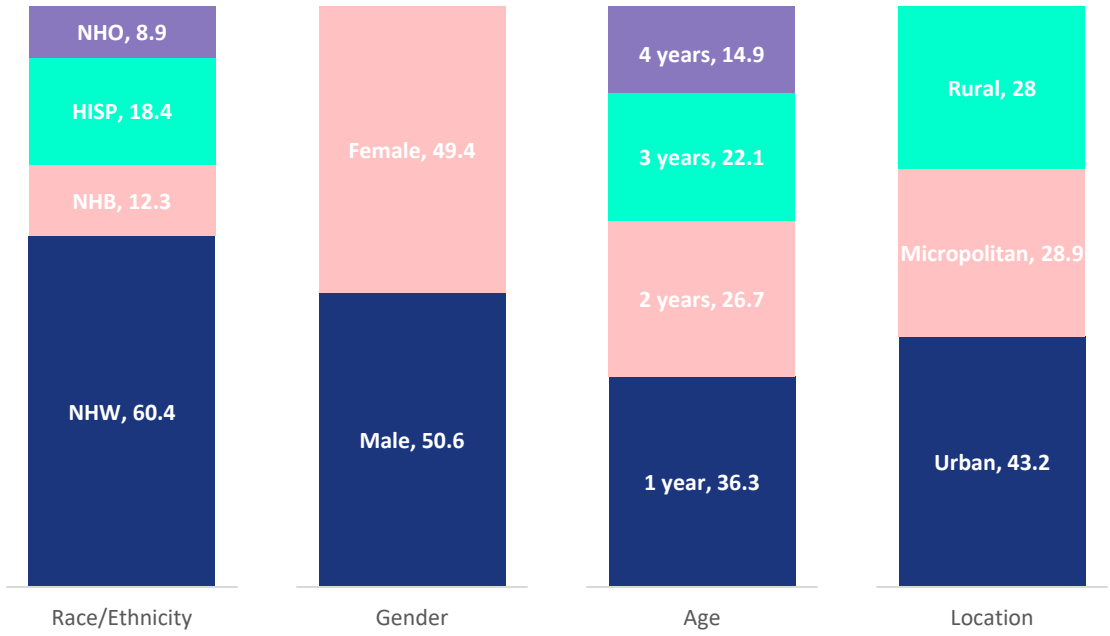
Results

Overall

The sample of children screened is diverse across gender, race and ethnicity, age and urban/rural classification. Over 60% of WIC-enrolled children ages 1 through 4 reported as non-Hispanic white (NHW), 18% reported as Hispanic (HISP), 12% as non-Hispanic black (NHB) and 9% non-Hispanic other (NHO).

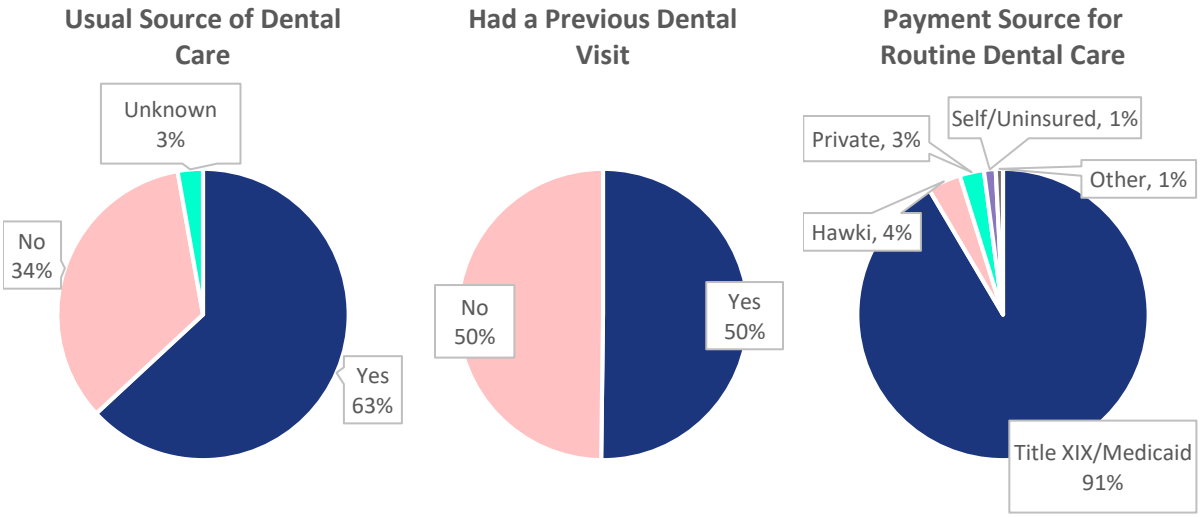
Males and females were equally represented, with 51% male and 49% female, and most children screened were 1-year-old (36%) (2 years=27%; 3 years=22%; 4 years=15%). Finally, urban/rural classification was represented with 43% of children receiving the screening in metropolitan counties, 29% in micropolitan counties, and 28% in rural counties (refer to Figure 1).

Figure 1: Sample is Diverse across All Demographics (%)



Consent form indicators include "Does the child have a usual source for dental care?," "My child's most recent dental visit was within the past… 6 months/1 year/3 years/5 years/Never" and "How do you pay for your child's routine dental care?." Nearly two-thirds of children reported having a usual source of dental care (63%), with just 3% "unsure." However, only 50% reported a previous dental visit within the past five years. Finally, a majority of children enrolled in WIC use Title XIX/Medicaid to pay for routine dental care, followed by Hawki – Iowa's children's health insurance program (4%), private insurance (3%), out-of-pocket (1%), and other source (0.8%) (refer to Figure 2).

Figure 2: Despite Two-Thirds Having Usual Source of Dental Care, only Half Had a Previous Dental Visit

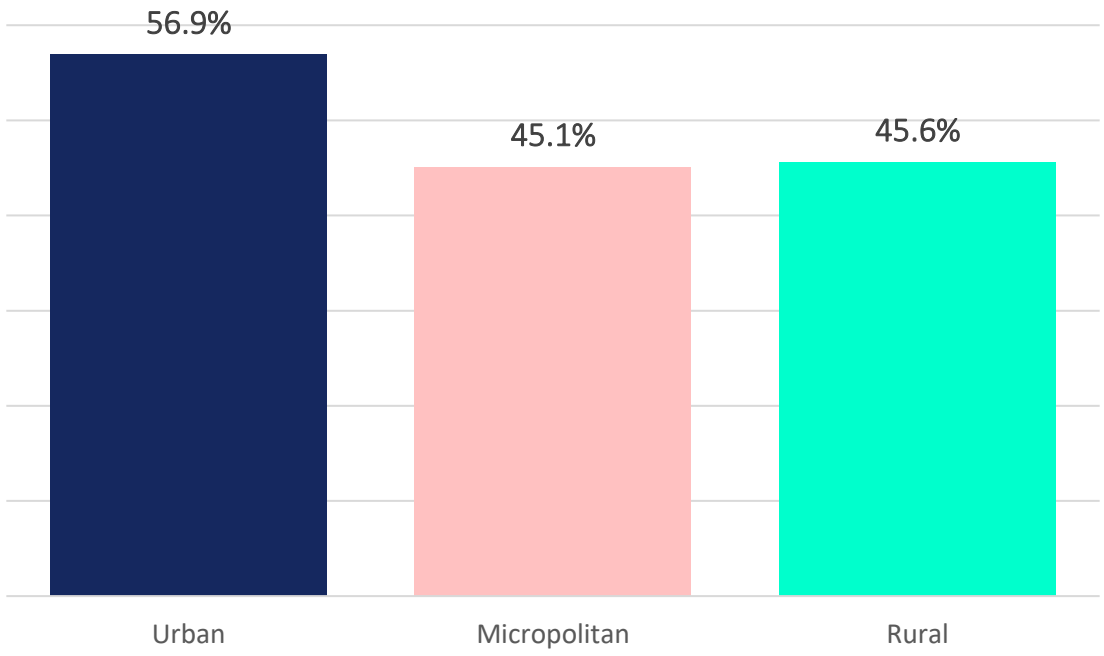


Finally, screening indicators include untreated decay, filled teeth and history of decay. Just 7% of WIC-enrolled children ages 1 through 4 had untreated decay, with an average of 2.9 teeth decayed per child with decay. Only 3% of children had filled teeth, with an average of 4.5 filled teeth per child with filled teeth, and a history of decay (decay and/or fillings) was present in 10% of children (refer to Appendix D, Table 3).

Previous Dental Visit

Significant disparities exist regarding whether or not a child had a previous dental visit across age and urban/rural classification. The number of children who had a previous dental visit increased as the child's age increased, with this being true for just 24% of 1-year-olds and 79% of 4-year-olds (2 years=51%; 3 years=73%). Children receiving a service in rural areas were also less likely to have a previous dental visit (46%) than those in metropolitan areas (57%) (refer to Figure 3; refer to Appendix D, Table 4).

Figure 3: WIC-Enrolled Children in Metropolitan Counties Most Likely to Have a Previous Dental Visit



Decay

Disparities exist for untreated decay across race and ethnicity and age of WIC-enrolled children, ages 1 through 4. Non-Hispanic whites had the lowest decay rate (5%) compared to 9% of children of Hispanic ethnicity, 9% of children of non-Hispanic black race, and 10% of children of non-Hispanic other race (refer to Figure 4). As would be expected, decay rates increase with the age of a child, with decay present in just 1% of 1-year-olds and 17% of 4-year-olds (2 years=5%; 3 years=11%) (refer to Appendix D, Table 5).

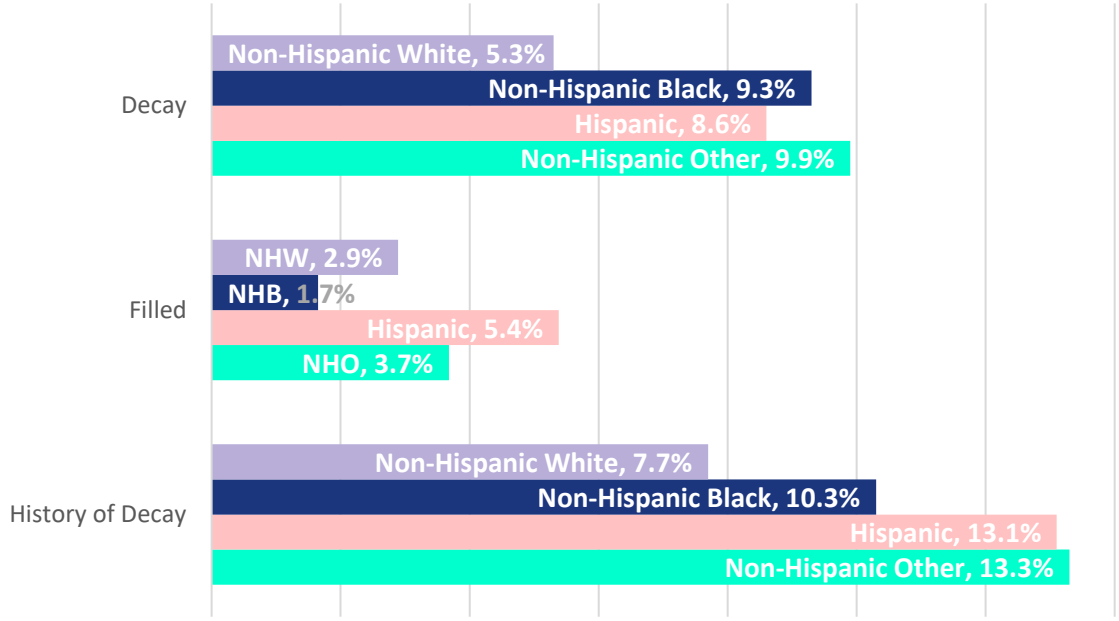
Filled

Disparities exist regarding filled teeth across race and ethnicity and age of WIC-enrolled children, ages 1 through 4. Non-Hispanic blacks had the lowest filled rate (2%) compared to 3% of children of non-Hispanic white race, 4% of children of non-Hispanic other race, and 5% of children of Hispanic ethnicity (refer to Figure 4). Filled rates increase with the age of a child, with filled teeth present in less than 1% of 1-year-olds and 11% of 4-year-olds (2 years=1%; 3 years=6%) (refer to Appendix D, Table 6).

History of Decay

Age, race and ethnicity indicate distinct differences in history of decay among WIC-enrolled children ages 1 through 4. Rates for history of decay increased with age, with 2% of 1-year-olds having a history of decay, and 26% of 4-year-olds (2 years=6%; 3 years=16%) (refer to Appendix D, Table 7). Non-Hispanic whites have the lowest rate among racial and ethnic groups (8%), followed by non-Hispanic black (10%), Hispanic (13%), and children of non-Hispanic other race (13%) (refer to Figure 4).

Figure 4: Decay Experience Higher for WIC-Enrolled Children of Non-White Racial and Ethnic Groups



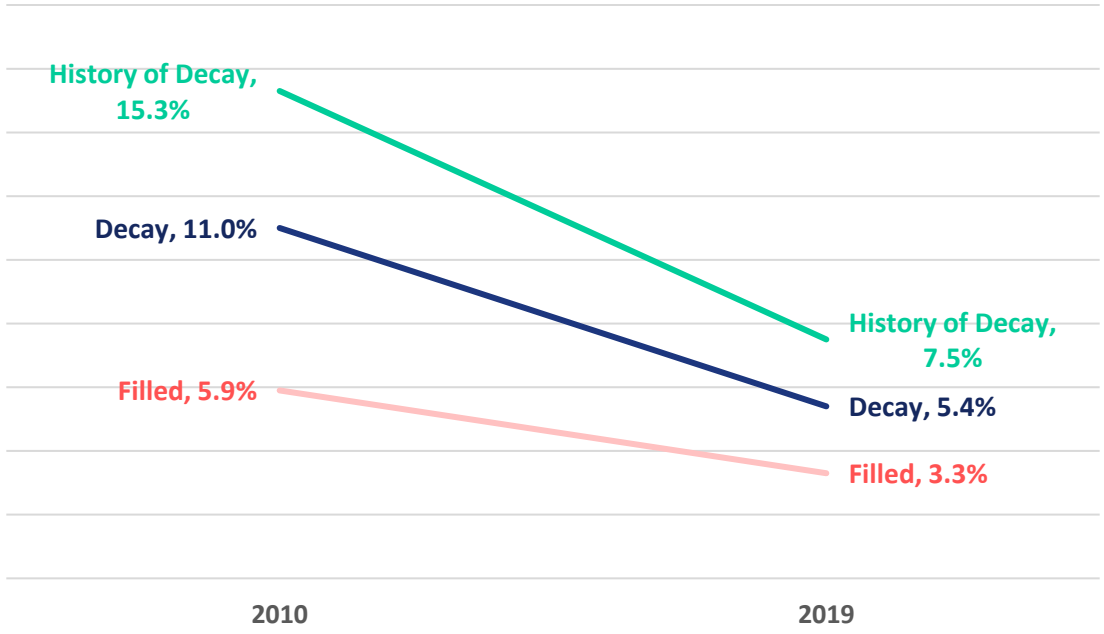
2010 Comparison

Though disparities exist within all indicators, each overall rate has improved since 2010.

- In 2010, only 32% of WIC-enrolled children age 6 months through 4 years had a previous dental visit, improving to 41% of WIC-enrolled children age 6 months through 4 years in 2019. The prevalence of decay has improved (decreased) since 2010.

- In 2010, 11% of WIC-enrolled children were found to have decay, compared to just 5% in 2019, a 50% decrease.
- The prevalence of having filled teeth has decreased since 2010, where 6% of WIC-enrolled children were found to have filled teeth in 2010 compared to just 3% in 2019. This is considered an improvement, assuming less need for restorations due to decay. Although it may also indicate a reduced availability to restorative care.
- Finally, the prevalence of having a history of decay has improved from 15% among WIC-enrolled children in 2010 to 8% in 2019. (refer to Figure 5; refer to Appendix D, Table 10).[7]

Figure 5: Decay Prevalence Cut in Half among WIC-Enrolled Children Age 6 months - 4 years



Discussion

While all oral health status indicators for WIC-enrolled children have improved since 2010, significant disparities exist among age, race and ethnicity, urban/rural classification and age.

Helping young children visit the dentist by age 1 is a primary goal of I-Smile™, as it promotes prevention, enforces oral hygiene habits, and decreases risks for adverse oral health outcomes such as decay and infection. Based on these survey results, only 1 in 4 of the WIC-enrolled 1-year-olds reported having a previous dental visit. Although this has more than doubled since 2010 (11.6%), there is still room for improvement to assure at-risk Iowa children receive their recommended first dental visit by their first birthday.[7] I-Smile™ coordinators report having a limited number of dental offices willing to accept Medicaid-enrolled children or that are comfortable examining and treating very young children. IDPH will work with I-Smile™ coordinators to continue to identify ways to reduce those barriers, using outreach to dental offices, continuing education opportunities, and working with physicians to provide fluoride applications and referrals to dentists for children younger than age 3.

The presence and duration of the I-Smile™ program, which began in December 2006, is likely related to improvements in all indicators. In 2019, presence of untreated decay and having a history of decay declined by 50% or more from 2010. Much of this may be due, in part, to the preventive services (e.g., fluoride varnish applications) and oral health education provided to children and parents/guardians through I-Smile™ at WIC clinics, Head Start centers, childcare centers and schools. The follow-up care coordination provided through I-Smile™ also helps families make dental appointments and access regular and restorative care.

Although the overall rate of decay is lower than in 2010, the average number of teeth with decay – 2.9 – is higher than anticipated. In addition, there are noted disparities across race and ethnicity, with decay present among just 5% of children of non-Hispanic white race, compared to 9 to 10% of non-white racial and ethnic children. I-Smile™ will work with the WIC program to research "best practice" strategies in other states that may help not only reduce decay, but also reach more non-white racial and ethnic children with early preventive care and education to reduce incidence of dental decay and a need for restorative care.

I-Smile™ serves all areas of Iowa, understanding that barriers to dental care exist across both rural and urban counties. While there are negligible differences across oral health outcomes in children younger than 5 years, such as decay and filled teeth, children receiving a preventive dental service at WIC in rural areas are less likely to have had a previous dental visit (46%) than those in metropolitan areas (57%), potentially leading to poorer oral health outcomes. Projects such as "Dentist by 1™" through the Delta Dental of Iowa Foundation may provide a model for addressing this lower access in rural counties[1].

Though the survey was a success, with over 6,000 children enrolled in WIC screened from June through August 2019, IDPH will increase focus on screener consistency in future surveys. Although a webinar calibration training and subsequent quiz was required for all nurses and dental hygienists prior to screening children at WIC, IDPH will consider different approaches to assure more uniformity for future surveys. For example, reported demineralization rates varied from 90% in one service area to 8% in a comparable service area, and as a result, demineralization rates were not included in final survey results. Despite differences among demineralization reporting, there was no statistical difference found between screenings by nurses or dental hygienists regarding presence of suspected decay or filled teeth, validating overall results.

Based on this survey evaluation, providing preventive dental services through I-Smile™ at WIC clinics is deemed successful in improving oral health outcomes of WIC-enrolled children. Continuing partnerships with the WIC program will be important to maintain and improve the health of at-risk children, and thus support the overall health of Iowans by strengthening opportunities for oral health access.

[1] Dentist by 1™ is an initiative through Delta Dental of Iowa Foundation that promotes a child's first dental visit by his/her first birthday.

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[1]Iowa Department of Public Health, Bureau of Oral and Health Delivery System. *Inside I-Smile™ 2018.* February 2019.

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[5]Jackson, S. L., Vann, W. F., Jr, Kotch, J. B., Pahel, B. T., & Lee, J. Y. (2011). Impact of poor oral health on children's school attendance and performance. American journal of public health, 101(10), 1900–1906. doi:10.2105/AJPH.2010.200915

[6]State Library of Iowa (2018). *Metropolitan, Micropolitan, and Combined Statistical Areas.* Institute of Museum and Library Services: The U.S. Office of Management and Budget. https://www.iowadatacenter.org/aboutdata/statisticalareas

[7]Iowa Department of Public Health, Oral Health Bureau. *2010 Oral Health Survey Report: Infants and Toddlers in Iowa's WIC Program.* September 2010.

Appendix A – Consent Form (Parent Present)

Consent Form

Template Screening and 'Other' Service – Parent Present

Child's Name:	Age:	Date of Birth:
Address:	Cell Phone: Other Phone:	
☐ Male ☐ Female	Race: ☐ White ☐ Black ☐ Hispanic ☐ Asian/Pacific Islander ☐ Native American ☐ Other ☐ Undetermined/ Unknown	
Child's Physician:	Child's Dentist:	
If applicable, child's Medicaid ID number:		

☐ **YES**, I give permission for my child to receive a dental screening and fluoride varnish application.
If prophys will be provided, more detailed medical history questions must be added to evaluate a client's risk for bacterial endocarditis or other conditions.

☐ **NO**, I do not give permission for my child to receive a dental screening and fluoride varnish application.

Please answer the following questions:

1. Has your child seen a dentist within the past 12 months? ☐ Yes ☐ No
2. My child's most recent dental visit was within the past: (please check one)
   ☐ 6 months ☐ 1 year ☐ 3 years ☐ 5 years ☐ has never seen a dentist
3. How do you pay for your child's dental care? (please check one)
   ☐ Self ☐ Medicaid/Title XIX ☐ ***hawk-i*** ☐ Private dental insurance ☐ Other
4. List any concerns you have about your child's mouth or teeth: _____
5. Has your child seen a physician within the past 12 months? ☐ Yes ☐ No
6. Is your child currently taking any medications? ☐ Yes ☐ No Explain: _____
7. Does your child have any allergies? ☐ Yes ☐ No Explain: _____
8. Are your child's immunizations up to date? ☐ Yes ☐ No Explain: _____
9. How do you pay for your child's medical care?
   ☐ Self ☐ Medicaid/Title XIX ☐ ***hawk-i*** ☐ Private medical insurance ☐ Other

I consent to insert agency name use of email and texting to send me scheduling and child health services information.
☐ Yes ☐ No Email address: _____

- I was offered a Notice of Privacy Practices.
- I understand that this consent for services is valid for one (1) year unless withdrawn in writing by parent, guardian or client (if of legal age).
- I understand that the services that will be received do not take the place of regular dental checkups at a dental office.
- I understand that these services are provided under the Iowa Department of Public Health, Maternal and Child & Adolescent Health Program.
- I understand records created and maintained as part of this program are the property of the Iowa Department of Public Health.
- I understand that the information from these records may be shared with the Iowa Department of Public Health and its agents and Title V contractors, Iowa Medicaid Enterprise, or designee for audit and quality improvement purposes or other legally authorized purposes.

_____
Parent/Guardian Signature Date

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Appendix B – Screening Form (Parent Present)

I-Smile Child Oral Health Services

Screening and 'Other' Services
Parent Present

Risk Level	Low	Moderate	High
	D0601	D0602	D0603

Duration: _____ min

Decay:	yes	no	# ____
Filled:	yes	no	# ____
Sealed:	yes	no	
Demin:	yes	no	

Client Name: _____ Medicaid/Client ID: _____

DOB: _____ Age: _____ Service Site: _____ Date of Service: _____

Translator needed ☐Yes ☐No

Parent Interview	*Documentation*		*Documentation*
Medical history reviewed		Dental visit frequency	
Parent concerns		Daily home care	
Current/previous problems		Feeding/snacking habits	
Family decay history		Fluoride exposure	

Oral Screening ☐D0190CC (Initial) ☐D0190 (Periodic) ☐D0145 (Oral Eval) ☐TD Modifier (Nurse provided) Duration: min

Condition of hard tissue	*Documentation*	*Condition of soft tissue*	*Documentation*
Obvious decay or demineralization		Gum redness, bleeding (e.g. when brushing)	
Decay history (fillings, crowns)		Swelling or lumps	
Visible plaque		Trauma or injury	
Stained fissures, enamel defects, trauma or injury		Other	
Sealed teeth		Findings of Parent Concern as noted on Consent	

Topic(s) of oral health education provided: ☐teething/eruption ☐non-nutritive sucking ☐home care ☐dietary habits ☐fluoride ☐regular dental visits ☐sealants ☐injury prevention ☐bottle/sippy cup use

Notes:

Products recommended or dispensed: ☐Toothbrush ☐Floss ☐Fluoride Rinse ☐Anti-Microbial Rinse ☐Salt water rinse ☐None ☐Other:

Service	*Documentation/Notes for services provided*				*Duration:*
Fluoride Varnish	☐Not provided	Type and Concentration:			min
Silver Diamine Fluoride	☐Not provided	Tooth number(s) and surface(s)	☐Consent signed	Type and Concentration:	min
Sealants	☐Not provided	Tooth number(s) and surface(s):		Product used:	min
Prophylaxis	☐Not provided	Notes:			min
Oral Hygiene Instruction	☐Not provided	Demonstration to whom:		Time In:	Time Out:
Nutritional Counseling	☐Not provided	Discussed with whom:		Time In:	Time Out:

Dental Referral / Care Coordination

Parent letter with screening results and post-op instructions for SDF and/or varnish given ☐Yes ☐No

Dentist referred to: _____

Notes: _____

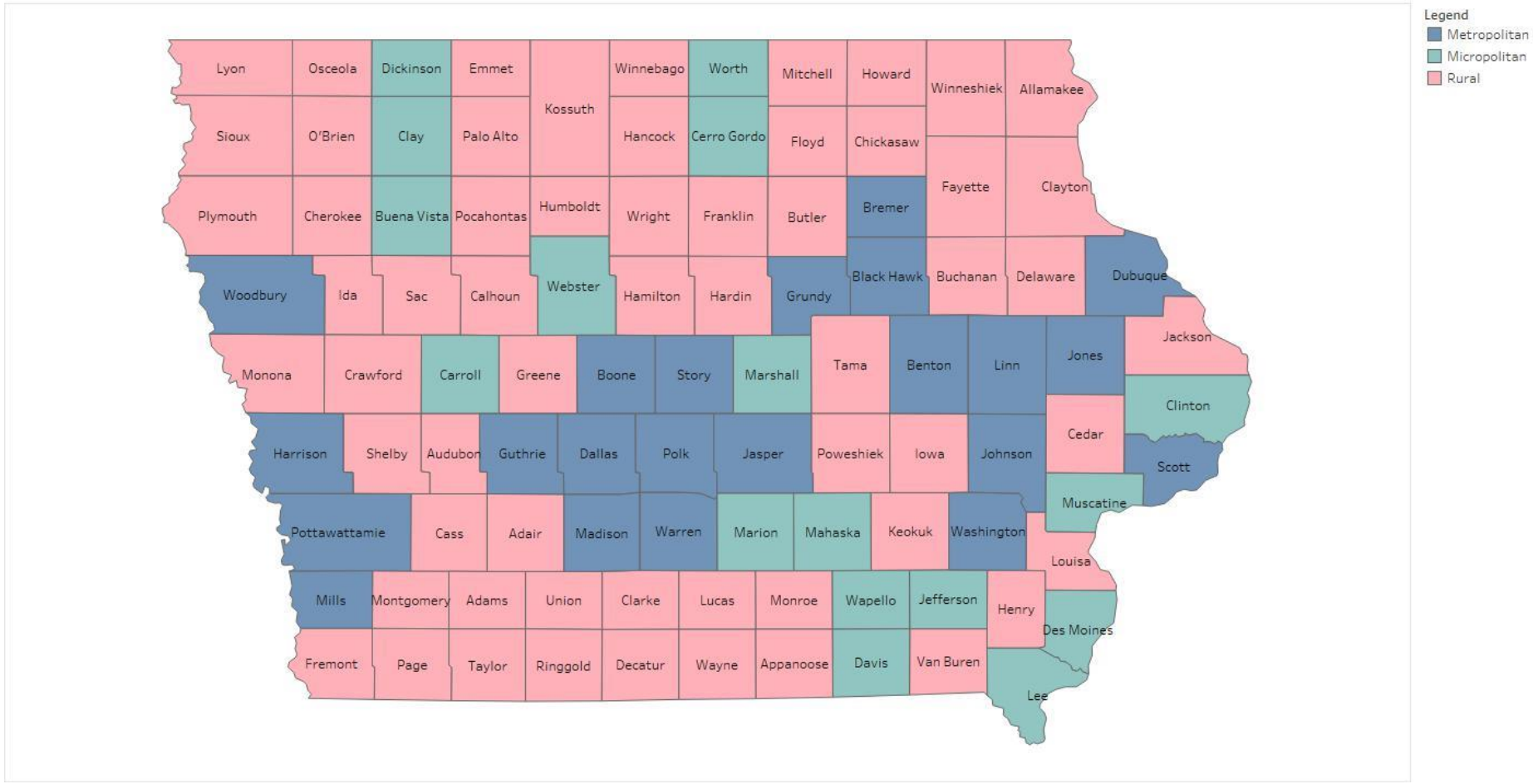
Referral need (based on risk assessment): ☐Immediate ☐Within 3 months ☐Within 6 months ☐Within 12 months

Provider Name and Credentials **Provider Signature** **Date**

	Service(s) documented in TAV		Barrier(s) documented in TAV

Rev 12/18

Appendix C – Iowa County Geographic Designations (2018)



Appendix D – Survey Frequencies

AGES 1 through 4

Table 1: Demographics

Variable	N	%	95% CI
Race/Ethnicity			
NHW	2386	60.4	58.9-62.0
NHB	484	12.3	11.2-13.3
Hispanic	725	18.4	17.2-19.6
NHO	353	8.9	8.1-9.8
Gender			
Male	2054	50.6	49.0-52.1
Female	2009	49.4	47.9-51.0
Age			
1 year	1473	36.3	34.8-37.7
2 years	1086	26.7	25.4-28.1
3 years	898	22.1	20.8-23.4
4 years	606	14.9	13.8-16.0
Urban/Rural Classification			
Metropolitan	1754	43.2	41.6-44.7
Micropolitan	1173	28.9	27.5-30.3
Rural	1136	28.0	26.6-29.3

*Interpret with caution (CI >20%, or CI > 2x %)

Table 2: Consent Indicators

Variable	N	%	95% CI
Does the child have a usual source of dental care?			
Yes	2529	63.1	61.9-64.6
No	1368	34.1	32.7-35.6
Unknown	112	2.8	2.3-3.3
Ever had a Dental Visit			
Yes	1927	50.2	48.7-51.8
No	1908	49.8	48.2-51.3
How Do You Pay for Your Child's Dental Care?			
Title XIX/Medicaid	3526	91.5	90.7-92.4
Hawki	144	3.7	3.1-4.3
Private	105	2.7	2.2-3.2
Self	51	1.3	1.0-1.7
Other	26	0.8	0.4-0.9

*Interpret with caution (CI >20%, or CI > 2x %)

Table 3: Screening Indicators

Variable	N	%/Mean	95% CI
Decay			
Yes	276	6.8	6.0-7.6
No	3787	93.2	92.4-94.0
Average Number of Decayed Teeth	263	2.9	
Filled			
Yes	133	3.3	2.7-3.8
No	3929	96.7	96.2-97.3
Average Number of Filled Teeth	129	4.5	
History of Decay			
Yes	387	9.5	8.6-10.4
No	3675	90.5	89.6-91.4

*Interpret with caution (CI >20%, or CI > 2x %)

Table 4: Previous Dental Visit by Demographics

Variable	N	%	95% CI
Race/Ethnicity			
NHW	1090	47.9	45.9-50.0
NHB	247	53.5	48.9-58.0
Hispanic	380	55.9	52.1-59.6
NHO	163	51.7	46.2-57.3
Gender			
Male	959	49.8	47.6-52.1
Female	968	50.7	48.4-52.9
Age			
1 year	325	23.5	21.3-25.7
2 years	528	51.3	48.2-54.3
3 years	619	73.0	70.0-76.0
4 years	455	79.3	76.0-82.6
Urban/Rural Classification			
Metropolitan	924	56.9	54.5-59.3
Micropolitan	504	45.1	42.2-48.0
Rural	499	45.6	42.7-48.6

*Interpret with caution (CI >20%, or CI > 2x %)

Table 5: Decay by Demographics

Variable	N	%	95% CI
Race/Ethnicity			
NHW	127	5.3	4.4-6.2
NHB	45	9.3	6.7-11.9
Hispanic	62	8.6	6.5-10.6
NHO	35	9.9	6.8-13.0
Gender			
Male	145	7.1	6.0-8.2
Female	131	6.5	5.4-7.6
Age			
1 year	21	1.4	0.8-2.0
2 years	55	5.1	3.8-6.4
3 years	99	11.0	9.0-13.1
4 years	101	16.7	13.7-19.6
Urban/Rural Classification			
Metropolitan	111	6.3	5.2-7.5
Micropolitan	80	6.8	5.4-8.3
Rural	85	7.5	6.0-9.0
Ever had a Dental Visit			
Yes	112	5.9	4.8-6.9
No	149	7.7	6.5-8.9

*Interpret with caution (CI >20%, or CI > 2x %)

Table 6: Filled Teeth by Demographics

Variable	N	%	95% CI
Race/Ethnicity			
NHW	69	2.9	2.2-3.6
NHB	8	1.7	0.5-2.8
Hispanic	39	5.4	3.7-7.0
NHO	13	3.7	1.7-5.6
Gender			
Male	63	3.1	2.3-3.8
Female	70	3.5	2.7-4.3
Age			
1 year	**	**	**
2 years	12	1.1	0.5-1.7
3 years	55	6.1	4.6-7.7
4 years	65	10.7	8.3-13.2
Urban/Rural Classification			
Metropolitan	53	3.0	2.2-3.8
Micropolitan	39	3.3	2.3-4.4
Rural	41	3.6	2.5-4.7

*Interpret with caution (CI >20%, or CI > 2x %)

**Count <6 children

Table 7: History of Decay by Demographics

Variable	N	%	95% CI
Race/Ethnicity			
NHW	184	7.7	6.6-8.8
NHB	50	10.3	7.6-13.0
Hispanic	95	13.1	10.6-15.6
NHO	47	13.3	9.7-16.9
Gender			
Male	196	9.5	8.3-10.8
Female	191	9.5	8.2-10.8
Age			
1 year	22	1.5	0.9-2.1
2 years	67	6.2	4.7-7.6
3 years	144	16.0	13.6-18.4
4 years	154	25.5	22.0-28.9
Urban/Rural Classification			
Metropolitan	158	9.0	7.7-10.4
Micropolitan	112	9.5	7.9-11.2
Rural	117	10.3	8.5-12.1
Ever had a Dental Visit			
Yes	254	13.2	11.7-14.7
No	112	5.9	4.8-6.9

*Interpret with caution (CI >20%, or CI > 2x %)

AGES 6 months through 4 years (Use these 2019 results to compare to those of the 2010 WIC survey).

Table 8: Demographics - Compare to 2010 WIC

Variable	N	%	95% CI
Race/Ethnicity			
NHW	3032	60.9	59.6-62.3
NHB	618	12.4	11.5-13.3
Hispanic	877	17.6	16.6-18.7
NHO	450	9.0	8.2-9.8
Gender			
Male	2583	50.2	48.9-51.6
Female	2559	49.8	48.4-51.1
Age			
6-12 months	1080	21.0	19.9-22.1
1 year	1473	28.6	27.4-29.9
2 years	1086	21.1	20.0-22.2
3 years	898	17.5	16.4-18.5
4 years	606	11.8	10.9-12.7
Urban/Rural Classification			
Metropolitan	2272	44.2	42.8-45.5
Micropolitan	1430	27.8	26.6-29.0
Rural	1441	28.0	26.8-29.2

*Interpret with caution (CI >20%, or CI > 2x %)

Table 9: Consent Indicators - Compare to 2010 WIC

Variable	N	%	95% CI
Does the child have a usual source of dental care?			
Yes	2946	58.3	57.0-59.7
No	1961	38.8	37.5-40.2
Unknown	145	2.9	2.4-3.3
Ever had a Dental Visit			
Yes	1969	40.8	39.4-42.2
No	2853	59.2	57.8-60.6
How Do You Pay for Your Child's Dental Care?			
Title XIX/Medicaid	4542	92.7	91.9-93.4
Hawki	145	3.0	2.5-3.4
Private	122	2.5	2.1-2.9
Self	63	1.3	0.97-1.6
Other	29	0.6	0.4-0.8

*Interpret with caution (CI >20%, or CI > 2x %)

Table 10: Screening Indicators - Compare 2010 WIC

Variable	N	%/Mean	95% CI
Decay			
Yes	276	5.4	4.8-6.0
No	4867	94.6	94.0-95.2
Average Number of Decayed Teeth	263	2.9	
Filled			
Yes	133	2.6	2.2-3.0
No	5009	97.4	97.0-97.8
Average Number of Filled Teeth	129	4.5	
History of Decay			
Yes	387	7.5	6.8-8.2
No	4755	92.5	91.8-93.2

*Interpret with caution (CI >20%, or CI > 2x %)